



NetApp®



Solution Brief

NetApp Integrated EVO:RAIL Solution

Extend Enterprise-Class Integrated Infrastructure to Branch and Departmental IT

KEY BENEFITS

- Simplify operations with an easy-to-use virtualization platform designed for branch offices and departmental workgroups without advanced IT expertise onsite.
- Accelerate the benefits of virtualization with a pre-integrated infrastructure that makes it easy to deploy, configure, and manage virtualized compute and storage.
- Protect data and applications by applying consistent data management, security, backup, and recovery everywhere in the enterprise.
- Embrace cloud scalability with a software-defined building block that makes it easy to integrate branch infrastructure with other private- and public-cloud resources.
- Reduce risk with a proven, enterprise-class solution that combines the world's leading storage OS and virtualization environment in a single, integrated platform.
- Derive maximum value with world-class service delivery from NetApp Support Services.

The Challenge

Across every industry, enterprises are virtualizing the data center to lower costs, speed time to market, and simplify operations. Although businesses already see these advantages at sites served by the main data center, not all areas are experiencing the same benefits. With limited skilled IT expertise on site, smaller branch and departmental workgroups often operate independently, relying on smaller-scale, standalone storage and virtualization environments. This can present a number of problems:

- **Increased complexity:** In an effort to keep things simple at the branch site, enterprises end up with multiple infrastructures, tools, and processes to manage their various sites and workgroups.
- **Divergent user experiences:** Critical workloads such as e-mail, databases, testing and development, and sharing may work differently at branch offices, hindering productivity.
- **Lack of enterprise-class capabilities:** Branch and departmental environments that don't integrate with the larger IT environment may not use

best-in-class operating systems or features. So, important capabilities—for security, performance, compliance, and data backup and mobility—may not be up to enterprise standards or consistently applied.

In an effort to simplify branch environments, some organizations turn to “hyperconverged” solutions that combine compute and storage into a single small-form-factor platform. But these solutions rarely support enterprise-class storage capabilities such as deduplication, thin provisioning, replication, or nondisruptive operations. They are usually offered by newer market entrants with no proven track record in enterprise environments. While these solutions allow administrators to use familiar virtualization tools, they still don't integrate with the enterprise's larger management, technology, or policies.

The Solution: NetApp Integrated EVO:RAIL

NetApp partnered with VMware to create a branch and departmental IT solution that combines the best of both worlds. The NetApp® Integrated

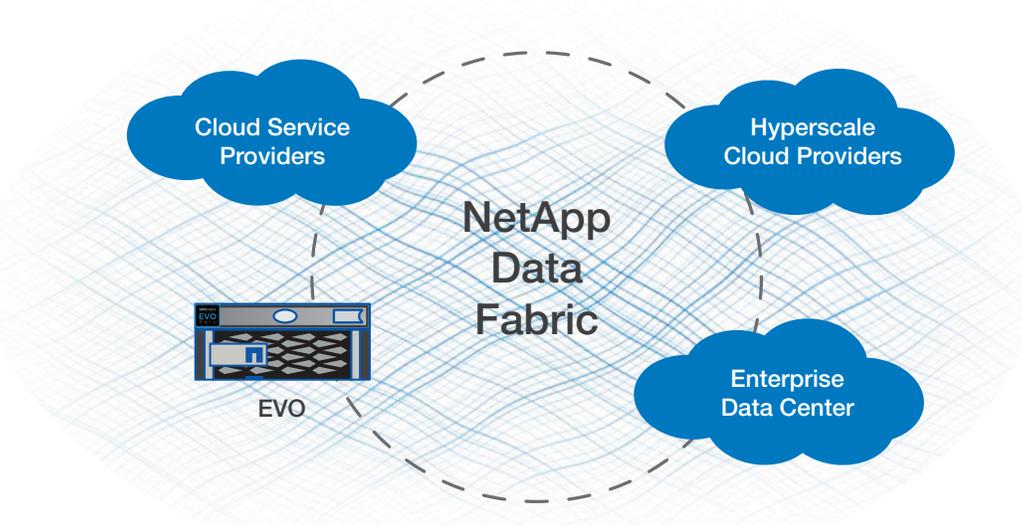


Figure 1) NetApp Integrated EVO:RAIL Solution integrates branch and departmental sites into data center and cloud infrastructures as part of a consistent enterprise-wide data fabric.

EVO:RAIL solution provides simple, easy-to-use storage virtualization in a hyperconverged form factor, but with best-in-class NetApp storage capabilities that integrate into an enterprise-wide NetApp Data Fabric. Now, enterprises can use the leading data management platform, the NetApp clustered Data ONTAP® operating system, with deep integration into the world's leading virtualization platform, VMware vSphere®. And they can extend consistent, cloud-scalable data management everywhere across the enterprise.

The NetApp Integrated EVO:RAIL solution provides a pre-integrated virtualized platform for branch offices and departmental workgroups. It combines compute and storage resources in a single 4RU platform that is easy to deploy and operate by IT generalists at remote sites. And it makes it easy to provide state-of-the-art virtualized storage capabilities—enterprise-class data management and recovery, cloud scalability, and full integration with an enterprise-wide data fabric—wherever businesses need them.

Reducing Complexity

The NetApp Integrated EVO:RAIL solution drastically simplifies complexity in the data center infrastructure to lower operating costs and speed time to market. It can be deployed in minutes with a simple setup and configuration utility, even at a branch office by IT generalists who don't have advanced storage expertise. The solution integrates enterprise-class NetApp storage capabilities with VMware vSphere, allowing administrators to easily manage and provision the entire virtualized environment from a single interface.

NetApp Integrated EVO:RAIL also makes things easier for enterprise IT. The integrated solution, available for order as a single SKU, has been rigorously tested for interoperability, taking all of the guesswork out of building and deploying virtualized infrastructure in a branch office. It gives enterprises a single system to deploy, manage, and operate, instead of having to invest significant time and resources into integrating separate components themselves. Even though the solution combines NetApp and VMware® technologies, IT can handle any support issues with a single call to NetApp's award-winning support services.

Cloud Integration

The primary rationale for moving to a virtualized environment is to make the data center more scalable and efficient. With NetApp Integrated EVO:RAIL, branch infrastructure can now integrate with the central data center in a unified data fabric, extending cloud scalability to the branch (Figure 1). The solution creates a software-defined building block that combines compute and storage, providing a foundation to operate the branch as part of a private cloud environment. Enterprises can control, integrate, and consistently manage their data across branch and central data center infrastructure. As part of a data fabric, enterprises can easily integrate public cloud services as part of a hybrid cloud environment. Whether users work from a branch office or at company headquarters, they can easily access the private and public cloud resources they need to meet changing demand and accelerate time to market.

Built on the NetApp clustered Data ONTAP platform, NetApp Integrated EVO:RAIL provides the flexibility to support multiple protocols and virtually any data type. It allows enterprises to scale storage as needed independently—without having to invest in additional unneeded compute nodes every time more storage is required.

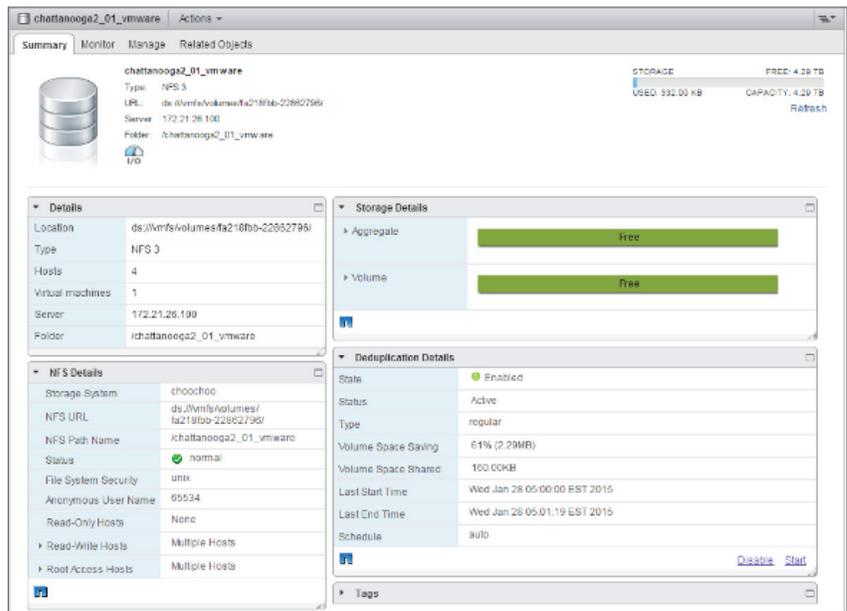


Figure 2) NetApp Virtual Storage Console for VMware vSphere fully integrates with VMware vCenter to provide end-to-end lifecycle management for virtual machines.

A Proven Enterprise Platform

The NetApp Integrated EVO:Rail solution provides a true enterprise-class platform, designed by the global industry leaders in storage and virtualization. Drawing on NetApp's leading branded storage OS and leading hypervisor in an integrated platform, enterprises can capitalize on next-generation cloud-integrated storage in the branch while reducing risk. Businesses gain full-featured data services, including deduplication, thin provisioning, cloning, and backups, with integrated data protection and mobility and unified support for both NAS and SAN workloads.

Unlike other solutions, NetApp Integrated EVO:RAIL provides built-in backup and disaster recovery features that are embedded in the data management architecture—not just operating as an additional service that degrades performance on a shared CPU. So businesses can reduce downtime and enable consistent, enterprise-class performance and reliability for their critical applications everywhere, from the central data center to the branch office.

All of this is made possible through the combined expertise of NetApp and VMware, which have 20 years experience developing and delivering data center solutions and more than 40,000 joint customers. NetApp can provide a proven enterprise feature set with innovative enhancements and global support that allow businesses to capitalize on state-of-the-art virtualization technologies with lower risk and without disrupting critical business operations.

Key Capabilities

The NetApp Integrated EVO:RAIL solution provides:

- **Simple configuration:** The solution includes an easy-to-use configuration wizard. Once a few simple credentials are entered, the tool automatically configures the clustered Data ONTAP storage, applying industry storage best practices and integrating the storage with the EVO:RAIL vSphere environment. Even users with no storage expertise can quickly begin provisioning storage from the VMware environment.
- **Unified and central management:** Administrators familiar with VMware vSphere can manage storage end to end using the NetApp Virtual Storage Console (VSC) vSphere client plugin, which is preinstalled and ready to use.

VSC fully integrates with VMware vCenter™ to provide comprehensive lifecycle management (monitoring and host configuration, backup and recovery, provisioning and cloning, optimization and migration) for virtual machines (VMs) in VMware environments (Figure 2). Local administrators have everything they need to improve both server and storage efficiencies, while adhering to enterprise-wide storage policies enforced through role-based access control.

- **Superior storage efficiency:** NetApp is the only storage provider that delivers proven efficiencies for both SAN and NAS environments. NetApp Integrated EVO:RAIL brings NetApp's industry-leading storage efficiency to the branch and department IT offices, delivering state-of-the-art storage for data deduplication, compression, thin provisioning, and VM cloning.
- **Shared storage and multi-tenancy:** Enterprises don't have to rely on inefficient, underutilized standalone servers and data storage to keep data secure. NetApp secure multi-tenancy features give enterprises the flexibility to isolate VMs, groups, business units, security zones, and layers within the same efficient infrastructure, avoiding data loss and unauthorized access.

- **Quality of service (QoS):** NetApp's groundbreaking clustered Data ONTAP system provides advanced QoS workload management. Enterprises can control the resources that each workload can consume to better manage performance spikes and improve customer satisfaction.
- **Cloud integration with the NetApp Data Fabric:** As more enterprise data moves to the cloud, the NetApp Integrated EVO:RAIL solution brings state-of-the-art cloud integration to the branch office. Integrating with an enterprise-wide NetApp Data Fabric, businesses gain software-defined capabilities to efficiently and consistently manage, transport, and access data in virtualized storage systems distributed across cloud environments. They can control, integrate, and better manage their data across the cloud to gain unprecedented speed and efficiency.
- **Enterprise-wide integrated data protection:** Enterprises can manage their data with the confidence that it is always protected and linked with the central data center. As part of

a consistent enterprise-wide Data Fabric enabled by NetApp, branches can take advantage of clustered Data ONTAP's embedded data protection features such as NetApp Snapshot® technology backups, NetApp SnapMirror® data replication and disaster recovery, and NetApp RAID DP® disk failure protection. Branch and departmental workgroups gain continuous data availability backup with no disruptions, even during technology refreshes, to protect their data and productivity.

- **Seamless scalability:** The NetApp Integrated EVO:RAIL solution is designed to scale up as performance and capacity requirements change, independent of compute. Businesses can start with a single cluster node and expand nodes as business needs grow. Branch sites can easily add more storage or compute resources from corporate IT, or even scale out by integrating with large public cloud providers. Branch and departmental workgroups retain the ability to easily add more storage nodes or controllers as needed, without disrupting operations.

Comprehensive Support Services

To help remediate and resolve technical issues, NetApp premium services give the right help at the right time with troubleshooting and technical support.

NetApp Services—Realize Greater Business Value

Whether planning a next-generation storage system, need specialized know-how for a major storage deployment, or want to optimize the operational efficiency of an existing infrastructure, NetApp Services and our certified partners have the expertise to assist.

About NetApp

Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.

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